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The consumers' view/reaction

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Introduction

The purpose of this paper is to present and discuss some of the issues and problems that should be taken into consideration when working with consumer reactions to boar taint. It is generally accepted that boar taint is an unpleasant odour or flavour mainly caused by the two compounds skatole and androstenone. Boar taint may occur when heating meat from some – but not all – non-castrated (entire) male pigs. Castrates and gilts may also, in some rare cases, contain high levels of skatole, and therefore exhibit boar-like taint.

Discussion

Many consumers do not know the term "boar taint" when asked directly. But if you ask: "Would you like your pork to smell of boar?" the answer will most probably be "No!" Farmers, their families and others with direct or indirect connections to pig production are of course consumers with a special knowledge regarding boar taint. They know that male pigs may be castrated and that entire male pigs may exhibit boar taint. The consumer views on and reactions to boar taint will therefore differ between urban and rural areas.

Describing consumer reactions to pork from entire male pigs is complicated because they depend on many factors and because they are not very easy to measure. As indicated above, consumers do not all react in the same way. Consumers in different countries react differently as demonstrated in the EU Boar Taint project [1], where for example the proportion of dissatisfied British consumers did not depend very much on the level of skatole and androstenone. A tentative explanation could be that British consumers are used to pork from entire male pigs, or that the consumers most sensitive to boar taint have stopped eating pork all together. Consumers within a country also have different sensitivity to skatole and androstenone – some being very sensitive and others being completely anosmic to androstenone [2]. The frequency of very sensitive persons seems to be larger among women than among men – at least regarding androstenone [2].

There seems to be a stronger correlation between skatole/androstenone and negative reactions to *odour* than to *flavour*, and for most countries, the correlation is stronger for *skatole* than for *androstenone* [1]. The former may account for consumers saying that the boar taint problem is larger when cooking than when eating.

When performing consumer surveys on boar taint, you usually select pigs with different levels of the malodorous compounds (for example low, medium and high levels) in order to test the variation in consumer reactions to the different levels. But when simulating the expected reactions of a given consumer population, you need to take into account the distribution of skatole and androstenone in the pig population. In most cases (countries) the distributions of skatole and androstenone are very skew, with many pigs at low levels, and very few pigs at high levels of the compounds [3]. The distributions may of course be changed by different actions within the pig production (feeding, management, slaughter weight etc.) or by sorting out pigs with high levels. This will affect for example the expected frequency of negative reactions within a given consumer population [4].

After describing the consumers reactions to boar taint, for example by calculating the expected frequency of negative reactions to pork from entire males, you may want to

decide if this frequency is acceptable or not. It may of course be a matter politics, but it also depends on what you compare with. You can compare with the alternative production method – *castrates*, or you can compare with the "consumers alternative" in the supermarket – pork from *female pigs*?

Furthermore, the frequency of negative reactions in a given survey depends on the choice of product and how the meat is cooked and presented to the consumers. If part of the problem is believed to be in connection with cooking the meat, this should be included in the survey. If the meat is kept warm for a longer period of time, or even reheated, some of the skatole and androstenone will evaporate leaving the meat more acceptable. On the other hand the consumers may experience warmed-over-flavour (WOF) that in most cases will reduce the liking of the meat. The WOF effect may not be the same for entire male pigs, castrates and female pigs because of differences in fatty acid composition. It is important to understand that the consumers "liking" is a sum of many factors that we may or may not have control over.

Conclusion

In general, consumers react negatively to high levels of skatole and androstenone in pork, but there are variations. Some individuals are very sensitive and others do not care at all. The frequency of negative consumer reactions to pork from entire male pigs depends on the *consumer population*, the distributions of skatole and androstenone in the *pig population* and of course, on the composition of pork *products* available on the marked.

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